

Review Comments
Stormwater Source Control Evaluation Work Plan
Former Mount Hood Solutions Warehouse Site
4444 NW Yeon Avenue
Portland, Oregon
Dated September 8, 2015

Submitted October 23, 2015

Following are the United States Environmental Protection Agency's (EPA) comments on the September 8, 2015 document entitled, Stormwater Source Control Evaluation Work Plan, Former Mount Hood Solutions Warehouse Site, 4444 NW Yeon Avenue, Portland, Oregon, prepared by GeoDesign, Inc. on behalf of Mount Hood Solutions, Inc. (MHS). The site is located approximately 2,000 feet from the Willamette River, within the City of Portland's Outfall Basin No. 19, which discharges to the Willamette River at approximately RM 8.5W. The property is listed as ECSI #81.

EPA understands the purpose of the work plan is to detail proposed measures for evaluation of stormwater source control, as specifically related to MHS's former occupancy of the project site. The work plan was prepared pursuant to the Agreement for Remedial Investigation and Source Control Measures, Oregon Department of Environmental Quality (DEQ) No. LQVC-NWR-08-12 dated October 27, 2008.

General Comments

1. The table below summarizes the available information relevant to the stormwater source control evaluation presented in the work plan. Additional stormwater characterization data collected under this work plan will be used to complete the stormwater source control evaluation and determine if additional source control measures are needed.

EPA Site Status Summary – Mount Hood Solutions Site

Question	Answer	Description
Are source control measures being implemented?	Yes	Stormwater source control measures performed by the current tenant, Benson Industries, include: performing industrial activities indoors; storing hazardous materials indoors; pavement sweeping on a monthly basis; catch basin and catch basin insert cleaning twice a year; and replacing catch basin filters once a year.

		The three-onsite catch basins were replaced in 2010 and MHS intends to remove sediment from and clean the onsite catch basins and conveyance line as described in the work plan.
Are there JSCS SLV exceedances?	Yes	Stormwater: The 2007 – 2008 data presented in work plan indicates zinc exceeds the JSCS SLV. Magnitude of exceedances not presented. No soil, groundwater, catch basin sediment sampling results presented. Historical stormwater data is limited to 1200 Z permit sampling, including Oil and Grease, Total Suspended Solids, copper, lead, zinc, and pH.
Are there stormwater PRG exceedances?	Yes	RAO 7: Zinc
Are pollutant concentrations typical of Portland Harbor industrial sites (e.g. below the knee of the curve)?	NA	Stormwater source control evaluation sampling has not yet been completed.
Are stormwater COCs from this site the same as those defined for the associated SDU?	NA	Stormwater source control evaluation sampling has not yet been completed.
Do sampled stormwater events meet JSCS criteria?	NA	Stormwater source control evaluation sampling has not yet been completed. The proposed sampling frequency and storm criteria need attention; see Specific Comment 10 and 11.
Is further stormwater data collection recommended?	Yes	Stormwater source control evaluation sampling has not yet been completed.
Are additional source control measures recommended?	NA	Stormwater source control evaluation sampling has not yet been completed.

2. This work plan presents conclusions on the groundwater pathway evaluation but does not include any data or analyses to support exclusion of the groundwater pathway from the source control evaluation (SCE). EPA has not reviewed the prior groundwater investigation reports

that are referenced in the work plan and cannot comment on whether prior data collection and evaluations are adequate to support the elimination of groundwater migration pathway evaluation.

3. The approach for sampling to evaluate the stormwater pathway does not follow stormwater sampling guidelines in the JSCS. MHS should revise the stormwater sampling approach to select the number of events, target storm event criteria (magnitude, duration, and antecedent dry period), and timing of sample collection after runoff to be consistent with JSCS guidelines.
4. The approach to evaluate legacy MHS contaminants in the stormwater conveyance lines may not be effective. One component of the work plan is to collect samples of inline solids from the onsite private conveyance line to evaluate legacy MHS contaminants in the system. This information could be used to evaluate MHS contaminant contribution to the stormwater system downstream of the site. The proposed approach is to: 1) remove and discard existing sediment in the catch basins; 2) flush out and collect the sediment in the onsite conveyance lines; and 3) analyze a composite sample of the collected sediment and sample of the wash water. As discussed in Specific Comment 9, differentiating MHS versus post-MHS activity sediment in the catch basins may not be possible.

Specific Comments

1. Section 2.4.2 Industrial Wastewater Discharge Permit: The location of the sanitary sewer should be shown on Figure 2.
2. Section 2.5.2 Phase I ESA: The locations of observed spillage and surface staining (first bullet) and nature of the material spilled should be described, if known.
3. Section 2.5.3 Limited Subsurface Investigation: The floor drains are a potential pathway from site source materials to the stormwater system. The location of the mixing room and floor drains and their relation to the stormwater system should be described in this section and shown on Figure 2.
4. Section 2.5.4 Stormwater Evaluation: The COP maps and documents described by the second bullet should be included in the work plan so the stormwater features in question are understood.
5. Section 3.2 Potential Pathways: The invert elevation of the stormwater system and the groundwater elevation should be provided in this work plan. The second bullet of this section implies that groundwater is infiltrating the stormwater system, which is relevant to the stormwater SCE.
6. Section 3.2 Potential Pathways: Although the groundwater pathway to the river is 2,000 feet, at minimum, a screening comparison should be made to identify potential concern for migration of the chlorinated volatile organic compounds (CVOCs), trichloroethene, and vinyl chloride, to the river. EPA has established Portland Harbor Preliminary Remediation Goals

(PRGs) for these two contaminants (RAOs 4 and 8) that could be used for a comparison and brief evaluation.

7. Section 3.3 Contaminants of Interest: No data has been presented to qualify the statement that, “previous phases of assessment did not reveal the presence of metals, PCBs, or PAHs at elevated concentrations within project site soil and groundwater.” Given the absence of soil and groundwater data comparison to applicable Portland Harbor PRGs and comparison of metals to background values, it is not known if these are contaminants of concern at the site. Because contaminants in soil and groundwater can contribute to contaminants in the stormwater system, comparison of soil and groundwater data to the PRGs should be included as a line of evidence in the stormwater SCE.
8. Section 4.2 Current Stormwater Source Control Measures: The specific hazardous materials referenced in this section should be listed.
9. Section 4.3 Proposed Sediment/Stormwater Collection and Conveyance Cleaning: While EPA understands the intent, it is unlikely that stormwater system sediments from MHS activities can be distinguished from stormwater sediments from the subsequent tenant. Legacy stormwater sediments are present in the conveyance line between and downstream of CB1, CB-2, and CB-3 and may have migrated into the catch basins subsequent to 2010 catch basin replacement activities.
10. Section 5.1.2 Sampling Frequency: The two (2) stormwater sampling events, proposed in the work plan, do not follow the stormwater sampling guidance in the JSCS. The JSCS specifies sampling four (4) representative storm events to characterize stormwater discharges. EPA recommends following the JSCS guidance which includes a minimum of 4 sampling events be sampled to select timing and magnitude of storm events.
11. Section 5.1.3 Storm Event Criteria: The JSCS guidelines should be followed for selection of storm magnitude, duration, antecedent dry period, and timing after start of discharge to collect samples representative of first-flush conditions.
12. Section 5.2 Analytical Methods and Concentration Goals: Arsenic is a constituent of interest (COI) and should be included in the metals analysis for all samples.
13. Section 5.2 Analytical Methods and Concentrations Goals: All constituents in Table 2 should be screened against the Portland Harbor PRGs in addition to the JSCS SLVs. Laboratory methods should be selected with reporting limits sufficient to meet these values. Per JSCS guidance, if a laboratory method cannot meet the screening level, then an alternative analytical method with lower method detection limits should be used, if it is currently available.
14. Section 5.2 Analytical Methods and Concentration Goals: Analysis of stormwater sediment samples are specified in this work plan but no analytical reporting limit goals are included. Include an additional table with analytical reporting limit goals for catch basin sediment and inline solids.

- 15. Section 7.0 Documentation and Reporting:** As part of the lines of evidence evaluation, stormwater, stormwater sediment, soil, and groundwater results should be screened against the Portland Harbor PRGs and the magnitude of PRG exceedances described. Results should also be screened against SLV and PRG exceedances of the “typical” industrial stormwater runoff concentration curves presented in Appendix E of the DEQ Guidance for Evaluating the Stormwater Pathway at Upland Sites.